

G20 – all INDCs in, but large Gap remains

Climate Action Tracker Update

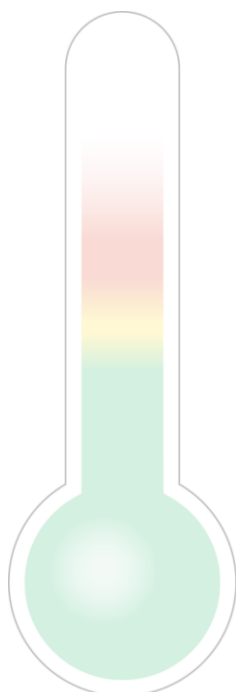
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Short note

The 2015 G20¹ Summit, (Turkey, 15-16 November) will see Heads of State and Government meet to discuss, among other issues, development, energy and climate change finance.

Ambitious greenhouse gas reduction proposals, and action, by the G20 states are an important political element for the success of the post-2015 climate agreement in Paris. These countries are responsible in aggregate for around 77% of global greenhouse gas emissions² and 87%³ of global GDP.

All G20 members have presented their “intended nationally determined contributions” or INDCs, to the UNFCCC for the Paris Agreement. The Climate Action Tracker (CAT) has previously assessed each of these INDCs and rated them against a full range of fairness criteria and on whether they are in line with keep warming below 2°C. In addition we assess here the aggregate adequacy of the G20 INDCs when taken together.

None of the G20 INDCs are in line with holding warming below 2°C, or 1.5°C.

The CAT has rated ten of the G20 INDCs as inadequate: Argentina, Australia, Canada, Indonesia, Japan, South Korea, Russia, Saudi Arabia, South Africa, Turkey. This means they are not consistent with limiting warming to below 2°C: if all governments adopted this level of ambition, global warming would likely exceed 3-4°C in the 21st century.

We rated six of the G20 INDCs as “Medium”—Brazil, China, India, the EU (incl. France, Germany, Italy and the UK), Mexico and the US— meaning they are not consistent with limiting warming to below 2°C either, unless other countries make much deeper reductions and comparably greater effort.

Taken together, the CAT finds that the aggregate G20 emissions gap for the period 2020-2030 is actually larger than the global emissions gap. This is because, under a variety of effort-sharing methodologies, many non G20 countries will be allowed emissions increases. A political commitment from the G20 to increase its climate action as a group would have a disproportionate positive benefit on closing the emission gap.

¹ By G20, we mean 19 individual countries—Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, South Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom and the United States—along with the European Union (EU).

² Based on emissions in 2010 GHG emissions, excluding forestry.

³ Gross Domestic Product (MER) in 2012, based on World Bank data (World Bank, 2015).

The G20 emissions gap measures the distance between where emissions (measured in billion tonnes of annual greenhouse gas emissions in a specific year) are headed, based on current policies, and where they need to be in order to be on a 2°C emissions pathway consistent with a fair and equitable level of effort.

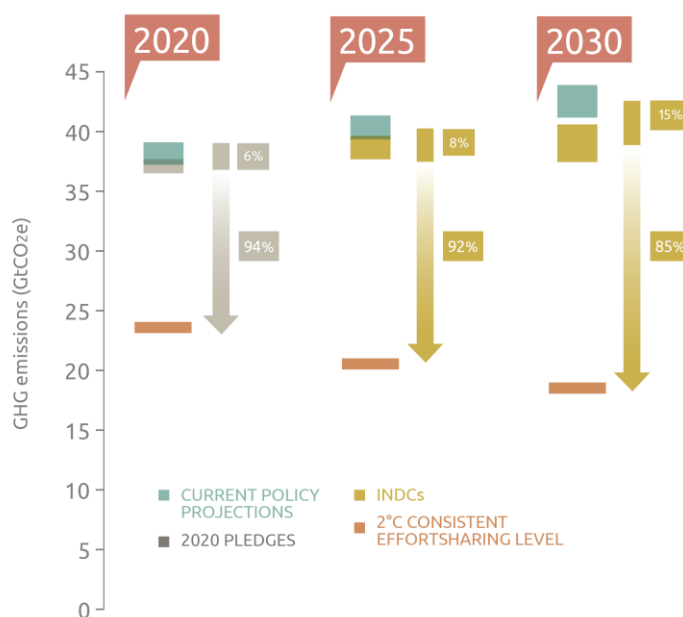


Figure 1. G20 emissions gap in 2020, 2025 and 2030 based on 2020 pledges and submitted INDCs

Compared to a baseline level of emissions (the CAT's 'current policies pathways'), the INDCs contribute to bringing the G20 closer to its 2°C-consistent emissions level by only 8% and 15% in 2025 and 2030. The earlier G20 2020 pledges only bring them 6% of the way.⁴

The picture is even more sobering if we look into the gap between emissions levels resulting from G20 INDCs and levels in line with 2°C. The G20 group is responsible for most of historical emissions and current capability to mitigate. **As a result, according to equity principles, these countries are responsible for a much larger amount of the mitigation needed to stay in line with 2°C than smaller economies and least developed countries that are still allowed to increase their emissions.** This means that the G20 emissions gaps are actually larger than the global emissions gaps and are roughly of 13, 18 and 20 GtCO₂e/year in 2020, 2025 and 2030 respectively.

Closing this gap is very important in order to ensure that limiting global warming below 2°C, and reducing to 1.5°C, remains technically and economically feasible. There is a significant emissions gap at the global level, and the G20 which is responsible for nearly 80% of global emissions, has a decisive role to play in closing it and on setting the world on a below 2°C pathway. The gap can be closed through domestic reductions or by helping others to reduce their emissions by the same amount.⁵

Previously the CAT [has found](#) that the INDC process has led to a significant improvement in promised action compared to earlier pledges of action and informal announcements. If fully implemented, the submitted INDCs for 2025 and 2030 are projected to lead to a warming of around 2.7°C by 2100 reflecting about a 0.4°C improvement on the situation in December 2014, where only announcements for 2030 and pledges for 2020 were available.

However, there is still a large emissions gap in 2025 and 2030 and, to stay below 2°C, the gap is 11-13 GtCO₂e and 15-17 GtCO₂e respectively. For 1.5°C the gaps in 2025 and 2030 are of 14-16 GtCO₂e and 21-23 GtCO₂e respectively and would therefore require significant improvement in the level of mitigation ambition.

⁴ As the reference used for calculating this gap includes currently implemented policies, the narrower gap in 2020 could be explained by progress towards meeting the 2020 pledges.

⁵ The 2°C consistent effort-sharing emissions level is the sum of the limit between CAT's "Medium" and "Sufficient" category for the individual G20 countries. For details, refer to section 'Calculation of the factor to differentiate between medium and sufficient' in <http://climateactiontracker.org/methodology/85/Comparability-of-effort.html>.

The Climate Action Tracker is an independent science-based assessment that tracks the emission commitments and actions of countries. It is a joint project of the following organisations:

Climate Analytics

Climate Analytics is a non-profit institute based in Berlin, Germany, with offices in Lomé, Togo and New York, USA, that brings together inter-disciplinary expertise in the scientific and policy aspects of climate change with the vision of supporting science-based policy to prevent dangerous climate change, enabling sustainable development. Climate Analytics aims to synthesise and advance scientific knowledge in the area of climate, and by linking scientific and policy analysis provide state-of-the-art solutions to global and national climate change policy challenges. Contact: Dr. h.c. Bill Hare, +49 160 908 62463

www.climateanalytics.org

Ecofys – Experts in Energy

Established in 1984 with the mission of achieving “sustainable energy for everyone”, Ecofys has become the leading expert in renewable energy, energy & carbon efficiency, energy systems & markets as well as energy & climate policy. The unique synergy between those areas of expertise is the key to its success. Ecofys creates smart, effective, practical and sustainable solutions for and with public and corporate clients all over the world. With offices in Belgium, the Netherlands, Germany, the United Kingdom, China and the US, Ecofys employs over 250 experts dedicated to solving energy and climate challenges. Contact: Prof. Kornelis Blok, +31 6 558 667 36

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Potsdam Institute for Climate Impact Research (PIK)

The PIK conducts research into global climate change and issues of sustainable development. Set up in 1992, the Institute is regarded as a pioneer in interdisciplinary research and as one of the world's leading establishments in this field. Scientists, economists and social scientists work together, investigating how the earth is changing as a system, studying the ecological, economic and social consequences of climate change, and assessing which strategies are appropriate for sustainable development. Contact: Dr. Louise Jeffery, louise.jeffery@pik-potsdam.de

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NewClimate Institute

NewClimate Institute is a non-profit institute established in 2014. NewClimate Institute supports research and implementation of action against climate change around the globe, covering the topics international climate negotiations, tracking climate action, climate and development, climate finance and carbon market mechanisms. NewClimate Institute aims at connecting up-to-date research with the real world decision making processes. Contact: Dr. Niklas Höhne, +49 173 715 2279

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